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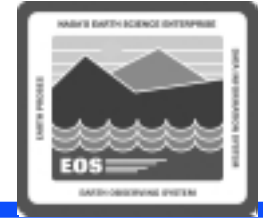
# CONFIGURATION MANAGEMENT

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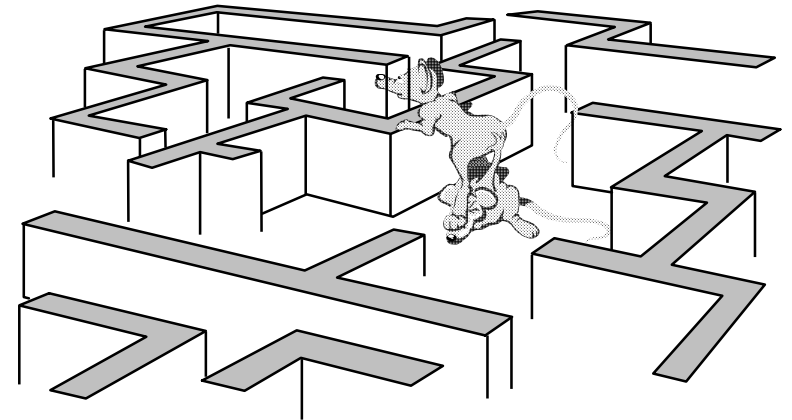
**ECS Release 5B Training**



# Overview of Lesson



- **Introduction**
- **Configuration Management Topics**
  - M&O role in CM activities
  - Configuration Control Boards (CCBs)
  - Configuration Change Request (CCR) Process
  - Software Change Process
  - Hardware Change Process
  - Baseline Change Process
- **Practical Exercise**





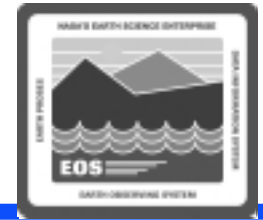
# Objectives



- **Overall: Proficiency in ECS Configuration Management**
  - Describe M&O role in CM activities
  - List Configuration Control Boards (CCBs), roles, and responsibilities
  - Process a Configuration Change Request (CCR)
  - Prepare a request for impact analysis
  - Process a software change
  - Review Configuration Parameters in Configuration Registry
  - Process a hardware change
  - Process a baseline change *Not currently fully supported*



# Importance



**Lesson provides preparation for several roles to ensure effective CM for implementation of system changes**

- **CM Administrators**
- **System Engineers, System Test Engineers, Maintenance Engineers**





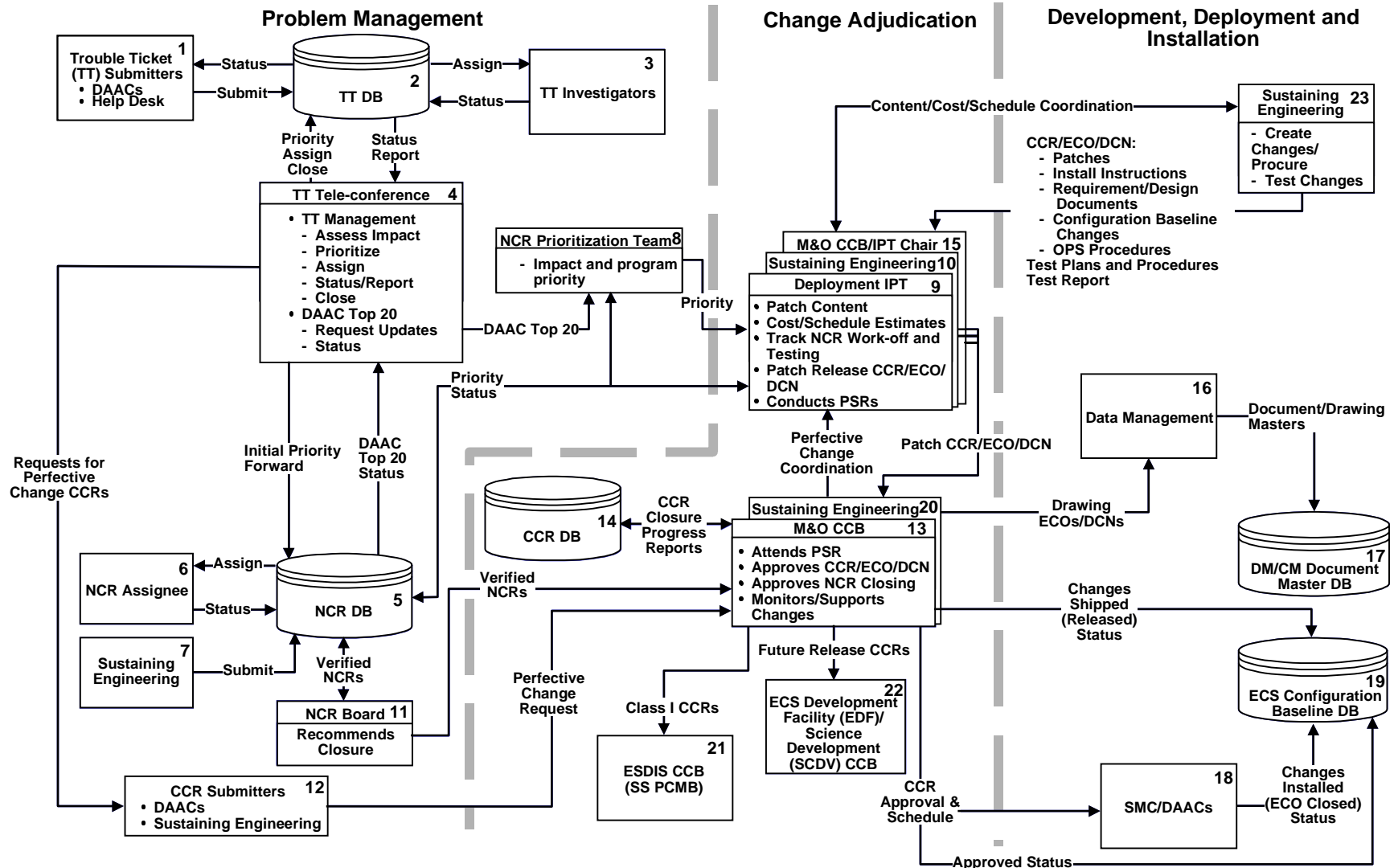
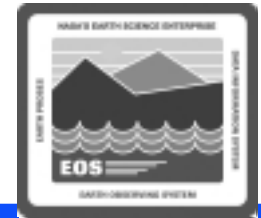
# M&O Role and CM Activities



- **Maintenance and Operations CM activities**
  - After acceptance of ECS
  - Administrative and technical support of change control
  - Documentation and coordination of changes to site hardware, software, and procedures
  - Configuration identification
    - Maintenance and control of technical documentation
  - Configuration status accounting
    - Recording and reporting information about the configuration status of ECS documentation, hardware, and software
    - XRP-II
  - Configuration audits
    - M&O supports internal and ESDIS assessments of project compliance with relevant CM plans

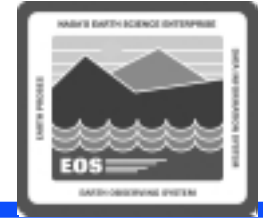


# M&O Role: Change Management



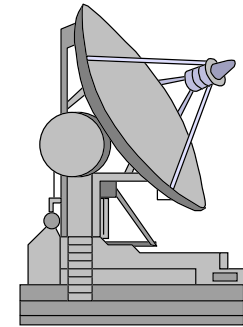


# M&O Role: Science Software CM



- **Science Software CM**

- developed at Science Computing Facilities
- upon delivery to DAAC, enters custody of DAAC CMO
- SSI & T: DAAC management and I & T team
- M&O role
  - support during I & T
  - support DAAC Manager after acceptance
  - if Science Software has inter-DAAC dependencies, support coordination with affected DAACs
  - ensure any necessary coordination with ESDIS prior to moving Science Software into production operations





# System Operations Support

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- **SOS -- System Operations Support**
  - liaison between sites and ESDIS CCB
  - liaison between operations and the Sustaining Engineering Organization (SEO)
  - coordination of CM functions
  - maintenance of Change Request Manager (DDTS)
  - oversight for dissemination of controlled items to sites
  - monitoring of installed configurations of hardware and software for conformance to approved baselines
  - M&O ensures coordination and availability of needed data for change management

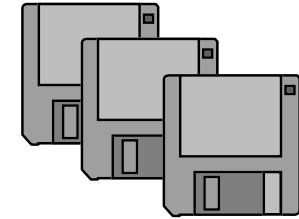


# M&O Role: Maintenance of the M&O Libraries

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- **Maintenance of M&O Documentation and Software Library**
  - both common and site-specific software
  - site personnel responsible for CM associated with library





# M&O Role: Library Administration

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- **Soft or hard copy maintained in library**
- **Document support directories**
  - CUSTOM/docs: file descriptive materials
  - CUSTOM/docserver: document repository
- **Microsoft Access database for library holdings and index**
- **Baseline Manager tool for documents that are under baseline CM control**



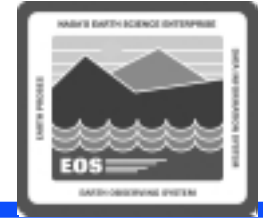
# Baseline Control



- **Baseline control milestones during maintenance and operations**
  - **Installation Plan (IP):** COTS hardware configuration
  - **Consent to Ship Review (CSR):** hardware and software configuration and plans for host sites
  - **Release Readiness Review (RRR):** documents state of configuration items at each host site
  - **Operational Readiness Review (ORR):** documents flight-certified, ESDIS-approved, fully integrated EGS
- **Site authority**
  - **ESDIS** - authority over changes to common software
  - **site CCB** - authority over site-specific Class II changes
  - **site-specific parameters for COTS software**
  - **specific configuration of tools and utilities, as delegated by ESDIS**



# Configuration Identification



- **Establishes unique identifiers for ECS control items: Hardware, Software, Databases, Documentation**
- **ECS System Baseline Specification identifies Configuration Items (CIs)**
  - **Defines configuration baseline data structure and data schema**
  - **Delineates how items will be named, described, versioned, and controlled**
  - **Defines the item's associated engineering specifications and location of the actual controlled baseline data (including the ECS Configuration Baseline database)**
- **Configuration Baseline may change with a new System Release or with a patch**



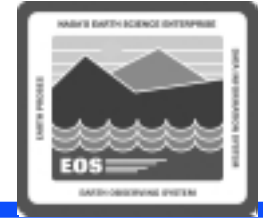
# Configuration Status Accounting



- **Reports, metrics, records to support configuration management with status tracking information**
  - identification and resolution of configuration problems (e.g., Trouble Ticket, NCR listings, progress reports)
  - M&O CCB review/approval of baseline changes (e.g., CCR listings, progress reports, CCB agendas, minutes)
  - monitoring progress for change implementation (e.g., ECO/DCN status reports, IPT Drop Matrix listings)
  - maintenance of ECS Configuration Baseline status (e.g. Approved/Shipped Changes, Installed Changes)
  - Verification and auditing of baselines (e.g. discrepancy metrics/reports reflecting differences between the approved and installed baselines in both the testing environment in the Verification and Acceptance Test Center [VATC] or Performance Verification Center [PVC] and at the DAACs)



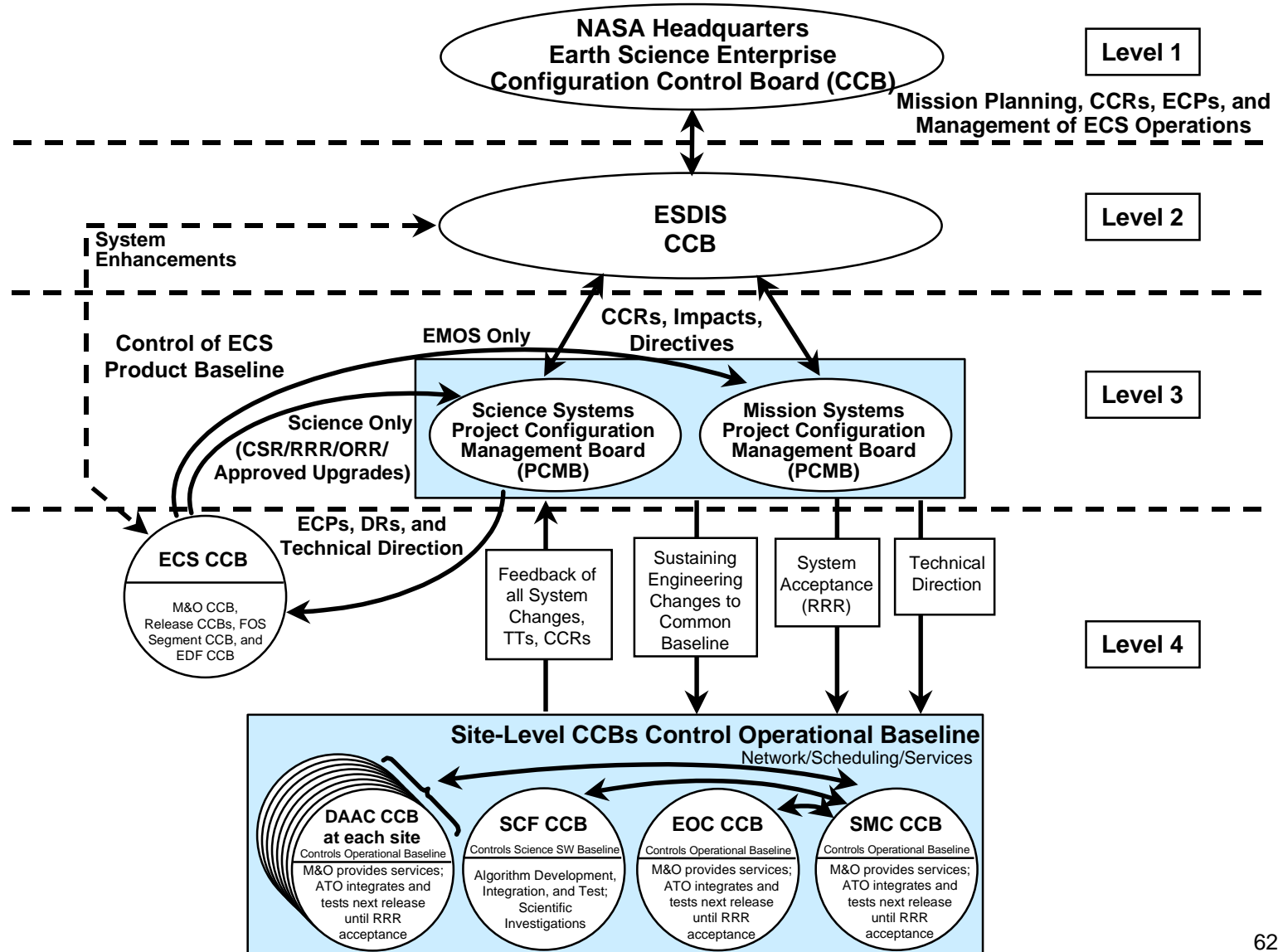
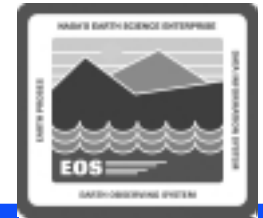
# Configuration Audits



- **Conducted by ECS CMO, supported by site CM**
- **Functional Configuration Audit (FCA) and Physical Configuration Audit (PCA) validate that:**
  - **as built configuration compares with the approved baseline**
  - **test results verify that each ECS product meets its specified performance requirements to the extent determinable by testing**
  - **the as-built configuration being shipped compares with the final configuration tested in the VATC**
- **Differences between the audited configuration and the final tested configuration are documented**
- **Automated scripts compare DAAC configurations to baseline documentation**



# CCB Hierarchy





# CM Responsibilities



- **ESDIS Management**
  - establishes ECS CM policies
- **CCBs**
  - classify, prioritize, evaluate, recommend, and approve (within their authority) changes to baselines
- **CM Administrators (at SMC, EOC, DAACs, SCFs)**
  - establish and maintain CM records
  - facilitate the configuration change request (CCR) process
  - monitor and report status of proposed and approved CM actions
  - support their respective CCB (as required)





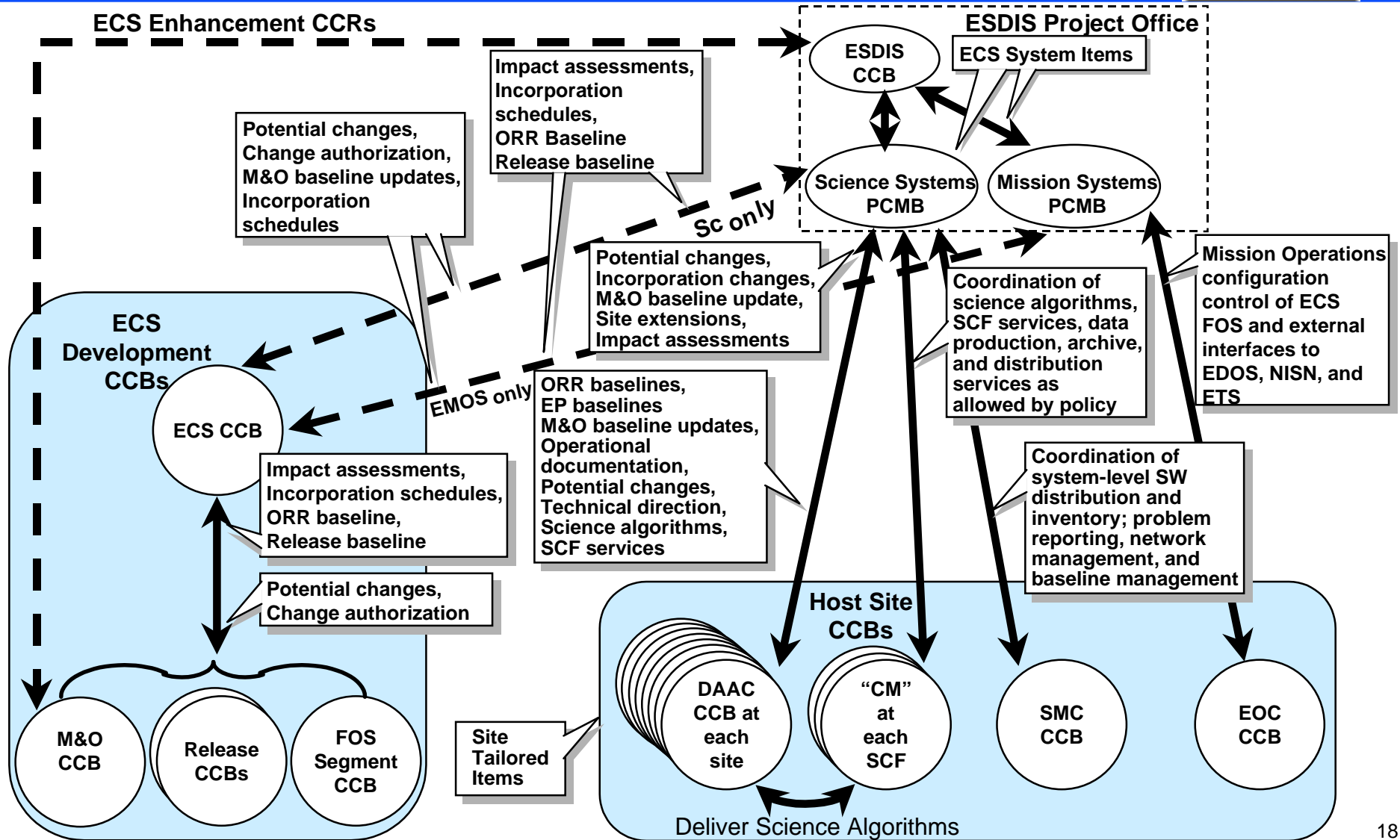
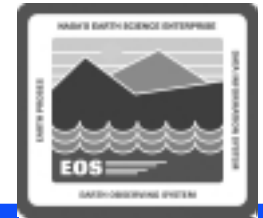
# CM Responsibilities (continued)



- **Sustaining Engineering Organization (SEO) --**
  - assesses feasibility and cost, schedule and performance impacts of proposed system-wide changes
  - implements such changes when directed by ESDIS
- **DAAC Sustaining Engineers --**
  - assess DAAC impacts of system-wide proposed changes
  - develop and maintain ESDIS-approved DAAC-specific modifications to ECS products
- **Maintenance Engineers --**
  - maintain ECS HW and report configuration changes resulting from maintenance actions



# Operational CCB Relationships





# Science Software and Change Control



- **Science Computing Facility (SCF) performs configuration control**
  - Software and Databases to be executed at another site
  - SCF resources that are made available to EOSDIS community
- **ECS M&O function directed by DAAC CCB**
  - Accepts science software and data from the SCF
  - Provides services to support EOC control of the EOC operational baseline
- **Central coordination by Project Control Management Board**
  - ECS integrity and quality of service
  - Coordination with internal and external networks, systems, facilities
  - EOSDIS CCB visibility into ECS operations
  - Convenient user administrative services



# Configuration Change Requests (CCRs)

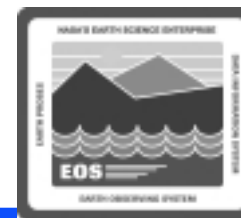
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- **No undocumented changes**
  - all requests for change documented using CCR form
  - CCR generated against the baseline affected by the proposed change
  - Form can be completed electronically
    - Word processing form
    - Change Request Manager tool (CM Administrator)
- **CCB review**
  - CCR submitted to appropriate CCB
  - CCR form may also be a cover sheet for a request to CCB for a deviation or waiver from baseline



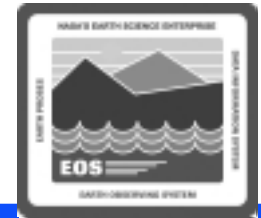
# ECS CCR Form



<b>Earth Observing System Data and Information System (EOSDIS) Core System (ECS) Configuration Change Request (CCR)</b>					
<b>1. Configuration Change Board (CCB)</b> ESDIS:____ ECS:____ SMC:____ DAAC: GSFC____, LaRC____, ASF____, EDC____, JPL____, NSIDC____, ORNL____ EOC:____				<b>2. CCR No.</b>  	
<b>3. Submitted Date:</b>  	<b>4. Revision</b>  	<b>5. Priority</b> Emergency <input type="checkbox"/> Urgent <input type="checkbox"/> Routine <input type="checkbox"/>	<b>6. Change Class</b>  	<b>7. Status</b>  	
<b>8. CCR Title:</b>  					
<b>9. Originator:</b> _____ <b>Org:</b> _____ <b>e-mail:</b> _____ <b>phone:</b> _____					
<b>10. Approval:</b> _____ <b>signature</b> _____ <b>date</b> _____					
<b>11. Reason for Change</b>  <div style="text-align: right;">(indicate attachment ____)</div>					
<b>12. Description of Change</b>  <div style="text-align: right;">(indicate attachment ____)</div>					
<b>13. Impact Analysis:</b> Cost: <input type="checkbox"/> None <input type="checkbox"/> Small <input type="checkbox"/> Medium <input type="checkbox"/> Large <small>(Not exceeding \$100,000) (\$100,000 to \$500,000) (Over \$500,000)</small> Evaluation Engineer: _____ <b>Org:</b> _____ <b>e-mail:</b> _____ <b>phone:</b> _____ Impact Evaluators: ESDIS____; ECS Dev____; SEO____; SMC____; DAACs: GSFC____, LaRC____, ASF____, EDC____, JPL____, NSIDC____, ORNL____; EOC____; Others _____ (indicate attachment ____) 					
<b>14. Comments: (Indicate Sites/ Organizations Affected)</b>  <div style="text-align: right;">(indicate attachment ____)</div>					
<b>15. Board Action:</b> <input type="checkbox"/> Approved <input type="checkbox"/> Withdrawn <input type="checkbox"/> Disapproved <input type="checkbox"/> Deferred Until _____ <div style="text-align: right;">date</div> Further Action Required: <input type="checkbox"/> ECP <input type="checkbox"/> Waiver <input type="checkbox"/> Deviation <input type="checkbox"/> Tech Direction <input type="checkbox"/> Contract Mod <input type="checkbox"/> DCN Other: _____					
<b>16. CCB Approval</b> Chair: _____ <div style="display: flex; justify-content: space-between;"> <span>signature</span> <span>date</span> </div>			<b>17. CCR Implemented</b> CM Admin. signature: _____ date: _____		



# Change Request Manager (DDTS)



ClearDDTS 4.1

File Select Metrics Options Special/Support To Do List Help

'Change\_Request' Records [SNAORTVCDF] [ECS\_CHNG\_REQ] 1 record

1 MSSdd00617 Add GUI to X11 Program (Example Only) II routine

Submit Commit Clone Refresh Clear Next Prev Print... Gripe

The workspace currently contains 1 record

Record

Modify Change\_State Links CM Help

ECS\_CHNG\_REQ Page 1/3

CCR Number: MSSdd00617 Submitted : 960521 Revision:  
Priority : routine Change Class: II  
Status : New Enclosures : 3

Title:  
Add GUI to X11 Program (Example Only)

CCR ORIGINATOR INFORMATION  
Originator Name: Joseph Winkler  
Organization : GSFC  
Phone Number : (904)583-9736  
Organization Evaluation Engineer: J. Holson

CONFIGURATION MANAGEMENT ADMINISTRATOR  
CM Admin. Name: efinch  
Organization : GSFC  
Phone Number : (301)935-4738

Enclosures

History Proposed Change Impact Summary Resolution



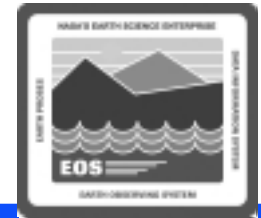
# Request for Impact Analysis



- **Support of ESDIS CCB may require assessment of the impact of a proposed CCR on local or system maintenance and operations**
- **Assessing the impact of CCRs with significant system implications and/or potential system-wide application may require the assistance of the ECS development organization**
- **Formal request for impact assessment according to Mission Operation Procedures for the ECS Project (611-CD-510-001)**
- **Impact assessments consolidated into a CCR Impact Summary**



# CCR Impact Analysis Form



## CCR Impact Analysis

**Responder Request Number:** \_\_\_\_\_

**Responder:** \_\_\_\_\_

Responder Point of Contract:

address: \_\_\_\_\_

\_\_\_\_\_

phone: \_\_\_\_\_

e-mail: \_\_\_\_\_

CCR Schedule Date: \_\_\_\_\_

**CCR Number:** \_\_\_\_\_

CCR Log Date: \_\_\_\_\_

**CCR Originator:** \_\_\_\_\_

CCR Originator Point of Contract:

address: \_\_\_\_\_

\_\_\_\_\_

phone: \_\_\_\_\_

e-mail: \_\_\_\_\_

**Evaluation Engineer:** \_\_\_\_\_

Evaluation Engineer Point of Contact:

address: \_\_\_\_\_

\_\_\_\_\_

phone: \_\_\_\_\_

e-mail: \_\_\_\_\_

Requested Return Date: \_\_\_\_\_

## Rough Order of Magnitude (ROM) Impact Analysis

Basis of Estimate:

Technical Assumptions and Comments:

Cost Impact:

None [ ]

Small [ ] < \$100,000

Medium [ ] \$100,000 < x < \$500,000

Large [ ] > \$500,000

Schedule Impact:

**Technical Assessment:** ( Your impact analysis should consider the implementation approach; interfaces affected; HW or SW changes required; documentation changes required -- change from/to pages; suggested alternatives, if any; and impact to security features. If your system is not impacted, please provide that information to the CM Administrator. )

**Comments:**

Signed: \_\_\_\_\_

(Responder)

Date: \_\_\_\_\_



# CCR Impact Summary



## CCR Impact Summary

**Evaluation Engineer:** \_\_\_\_\_

Evaluation Engineer Point of Contact:  
address: \_\_\_\_\_

phone: \_\_\_\_\_

e-mail: \_\_\_\_\_

CCR Board Date: \_\_\_\_\_

**Resources Summarized:**

**Technical Summary:**

**ROM Summary (BOE, Cost, and Schedule):**

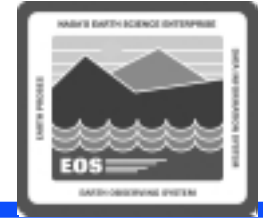
**Recommendation:**

Signed: \_\_\_\_\_  
(Evaluator)

Date: \_\_\_\_\_



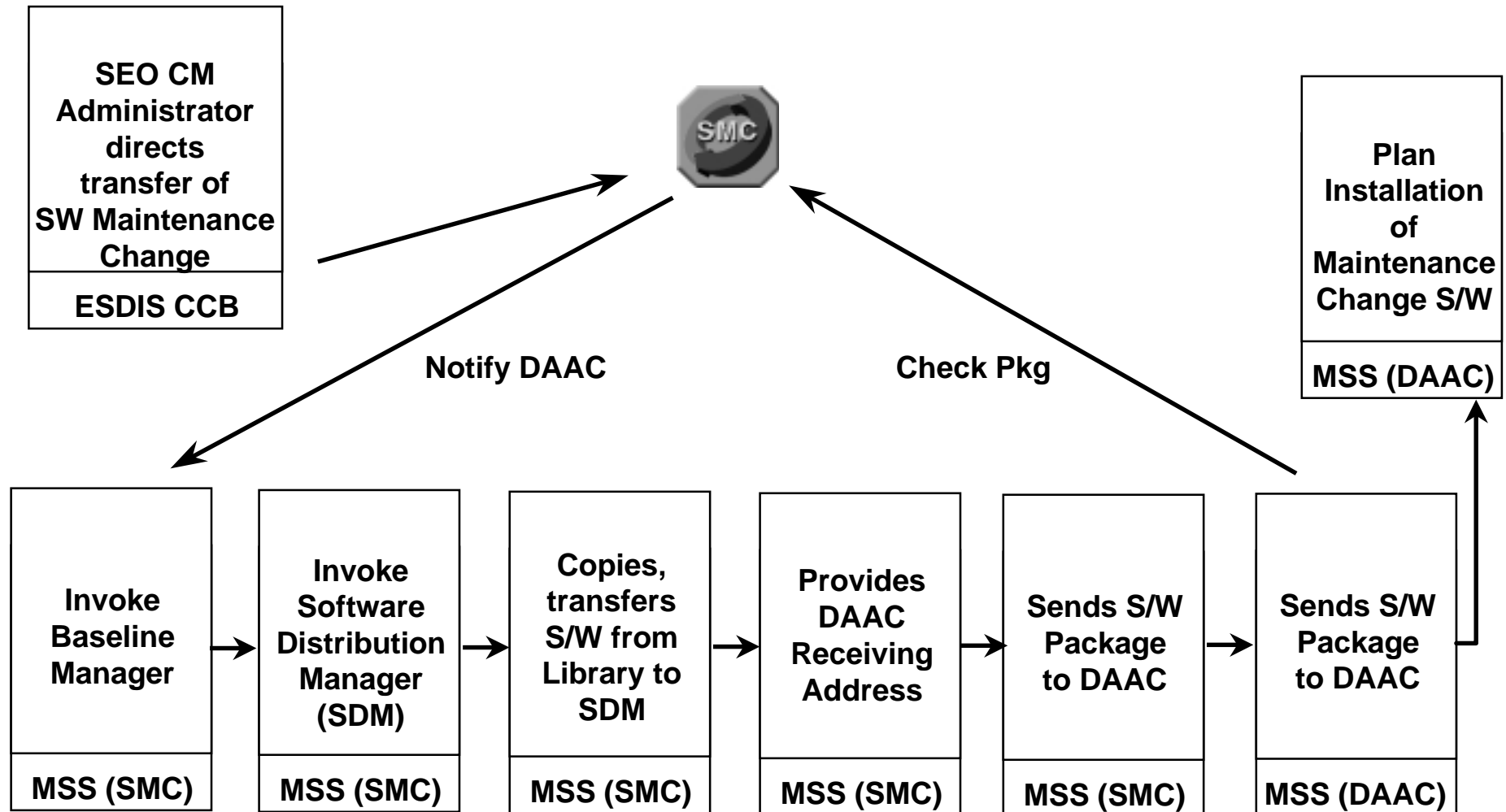
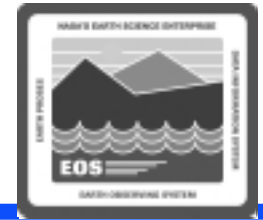
# Software Baselines and Changes



- **Software release is through ESDIS SMC or, with ESDIS permission, directly to the sites**
  - Version Description Document (VDD) provides summary documentation package
  - ECS Project CMO assembles and packages the delivery
- **Change Scenarios**
  - COTS software problem
  - custom software problem
  - science software upgrade
  - COTS software upgrade
  - system enhancement

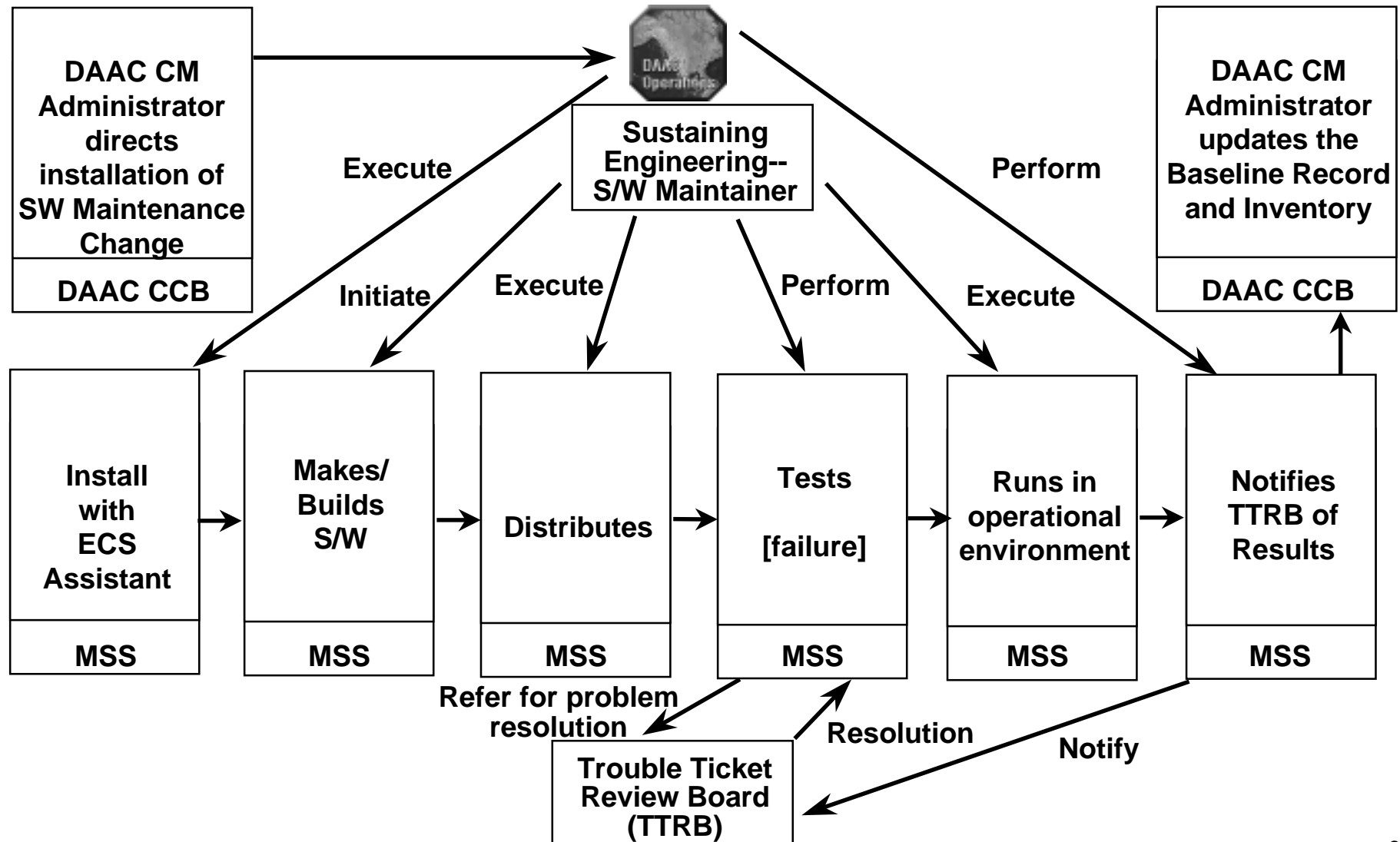
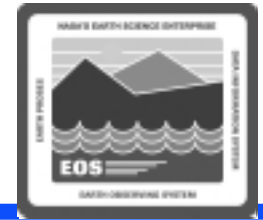


# Software Transfer & Installation: Transfer Functional Flow





# Software Transfer & Installation: Installation Functional Flow





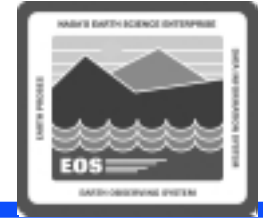
# Software Transfer



- **When software maintenance change package is ready and approved by ESDIS CCB, SEO CM Administrator requests SMC to distribute**
- **SMC CM Administrator promotes the change to the Operational Baseline and updates the Baseline Record and Inventory Record**



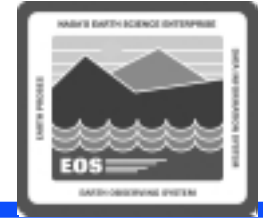
# Software Change Installation



- **Review/approval by ESDIS precedes systematic installation**
  - **VDD final updates for system and center-specific material; final VDD is published**
  - **Installation of the build and operational and user documentation IAW installation schedule**
    - **ECS Assistant for installation**
    - **Scripts for System Administrator to do installation**
  - **Controlled document updates provided to SEO Document Maintenance and entered into CM**
  - **CM system updated to reflect M&O and center-specific baselines**



# Software Change Installation (Cont.)



- **Implementation and test of software by DAAC Software Maintenance Engineer**
  - Tests individual packages (unit, subsystem, system)
  - Runs full final software in operational environment
  - Notifies SMC of results
- **DAAC CM Administrator updates site baseline record using Baseline Manager (BLM) tool**
  - DAAC CCR Number
  - Software package identification
  - Package name
  - Software upgrade name
  - Version
  - File structure
  - Type
  - Installation date



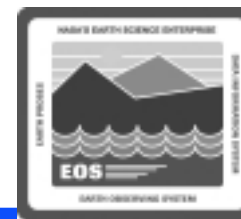
# Configuration Parameters



- **Default settings may or may not be optimal for local operations**
- **Changing parameter settings**
  - May require coordination among Configuration Management Administrator, Database Administrator, and Operations personnel
  - Some parameters accessible on GUIs
  - Some parameters changed by editing configuration files
  - Some parameters stored in databases
- **Configuration Registry (Release 5B, 2nd delivery)**
  - Script loads values from configuration files
  - GUI for display and modification of parameters
  - Move (re-name) configuration files so ECS servers obtain needed parameters from Registry Server when starting



# Configuration Registry



**Database Login**

User Id:

Password:

Server:

DB Name:

**ECS REGISTRY (1.0)**

File Utilities

Attribute Tree Name:

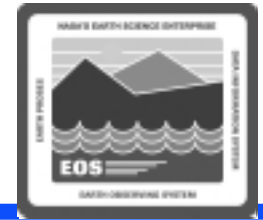
Attribute Listing <75>

PseudoAttribute	One	Two	Three
Name	EcInGran		
ProgramID	5800000		
ApplicationID	5000000		
Site	vatc		
DeltaTime	3600		
MajorVersion	1		
MinorVersion	0		
Release	B		
SubSysName	INS		
AppLogSize	5000000		
AppLogLevel	0		
HostPolicy	multiple		
ServerDescription	This is ../subsys/ecs/server		
oid_EcInGranObj	80e4c765-7b28-1023-891b-08006		
oid_EcAgManager_TS2	80e4c766-7b28-1023-891b-08006		
ListenThreads	20		
Protocol	EMPTY		
KeyFile	CUSTOM/security/EcInGran.Keyf		
PrincipalName	EcInGran		
AcIPermission	x		
AcIDBTableName	IngestAcItable		
AcIName	InGranObj		
AppStrtNum	12345		
DBAcIKey	PfAcIKey		
DBLibrary	SYBASE_CT		
DBServer	t1mss07_srvr		
DBLoginName	acluser		

Attribute Information  
Mapped To Mode: TS2



# Configuration Registry (Cont.)



**Attribute Information**

Attribute Name:

Description:

Attribute Properties

Attribute Data Type:  ▼

MIN:

MAX:

**Configured Values**

**Change Comment**



# Hardware Baselines and Changes



- **Hardware baseline established at Release Readiness Review (RRR) following formal Physical Configuration Audit (PCA) and Functional Configuration Audit (FCA)**
  - ESDIS approves establishment of operations baseline
  - Configuration baseline recorded in Engineering Release Record
  - M&O conducts testing of builds to ensure proper implementation of CCRs with no defects introduced
- **Change Scenarios**
  - COTS hardware problem repair that requires a CCR
  - System enhancement



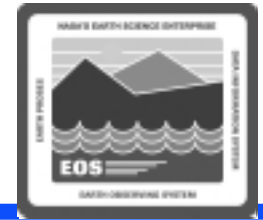
# Hardware Change Installation



- Repair with part of same make, model, version does *not* require CCR
- Change in make, model, version of a part to be used for repair, e.g., in an emergency, necessitates CCR to document the change
  - Review/approval by site CCB
  - Review by SEO/ESDIS for impacts/applicability to other sites
  - Provision of controlled document updates to SEO Document Maintenance and entry into CM
  - CM system updates to reflect change
  - Audits (FCA/PCA)



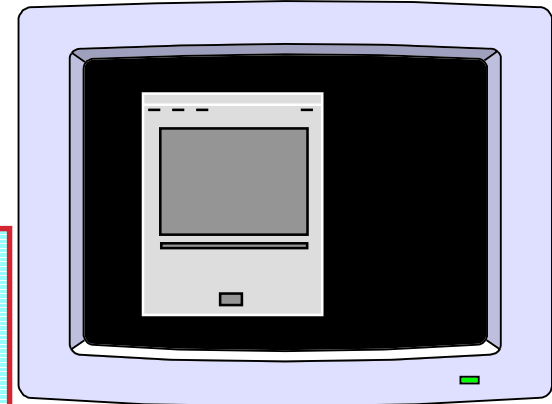
# Changes to the Baseline



- **CM Tools for baseline changes**
  - Change Request Manager: DOTS

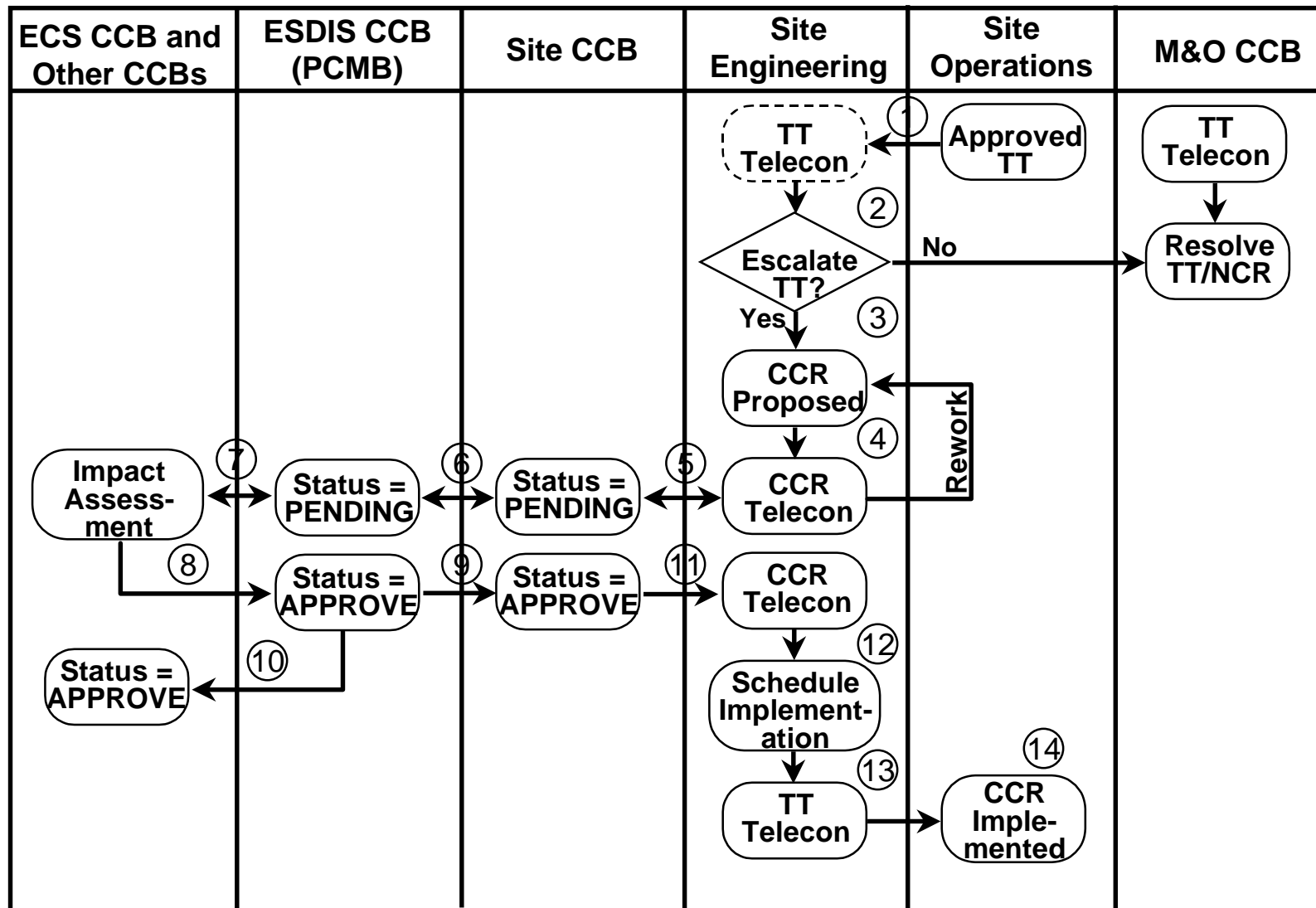
– Baseline Manager: XRP-III  
– Inventory/Logistical Manager: XRP-III  
*Incomplete: Baseline Database may not be deployed; Inventory Database for information only*

- **Related tools**
  - From Management Subfunction software
    - Trouble Ticket System (TTS)
    - Problem reporting and tracking
    - Used by users, operators, system administrators





# CCR Approval Flow





# Baseline Terms and Concepts



- ***Baseline Management*** is to identify and control baselined versions of hardware and software, and maintain a complete history of baseline changes
- ***Control Item*** is any ECS item under version control by CM
- ***Configuration Item (CI)*** is an aggregation of hardware, firmware, software, or any discrete component or portion, which satisfies an end user function and is designated for configuration control
- ***Baseline*** is a configuration identification document or set of such documents formally designated by the Government at a specific time in the life cycle of a CI
- ***Configured Article*** is a control item reportable as part of the Configured Articles List (CAL)



# Baseline Terms and Concepts (Cont.)



- **ECS Structure and Baseline Terms**
  - **Assembly:** an item made up of other items
    - **Parent:** a higher-level item (e.g., an assembly)
    - **Child:** an item that is a component of a higher-level item
  - **Bill of Material:** list of items that comprise an assembly
  - **Product Structure:** the parent-child pairings that define the bill of material for an assembly; each product structure record specifies the effective dates and quantities for a single component of a parent for each engineering change
  - **Active Date:** the date a component becomes effective in an assembly's bill of material
  - **Inactive Date:** the date a component is no longer effective in an assembly's bill of material



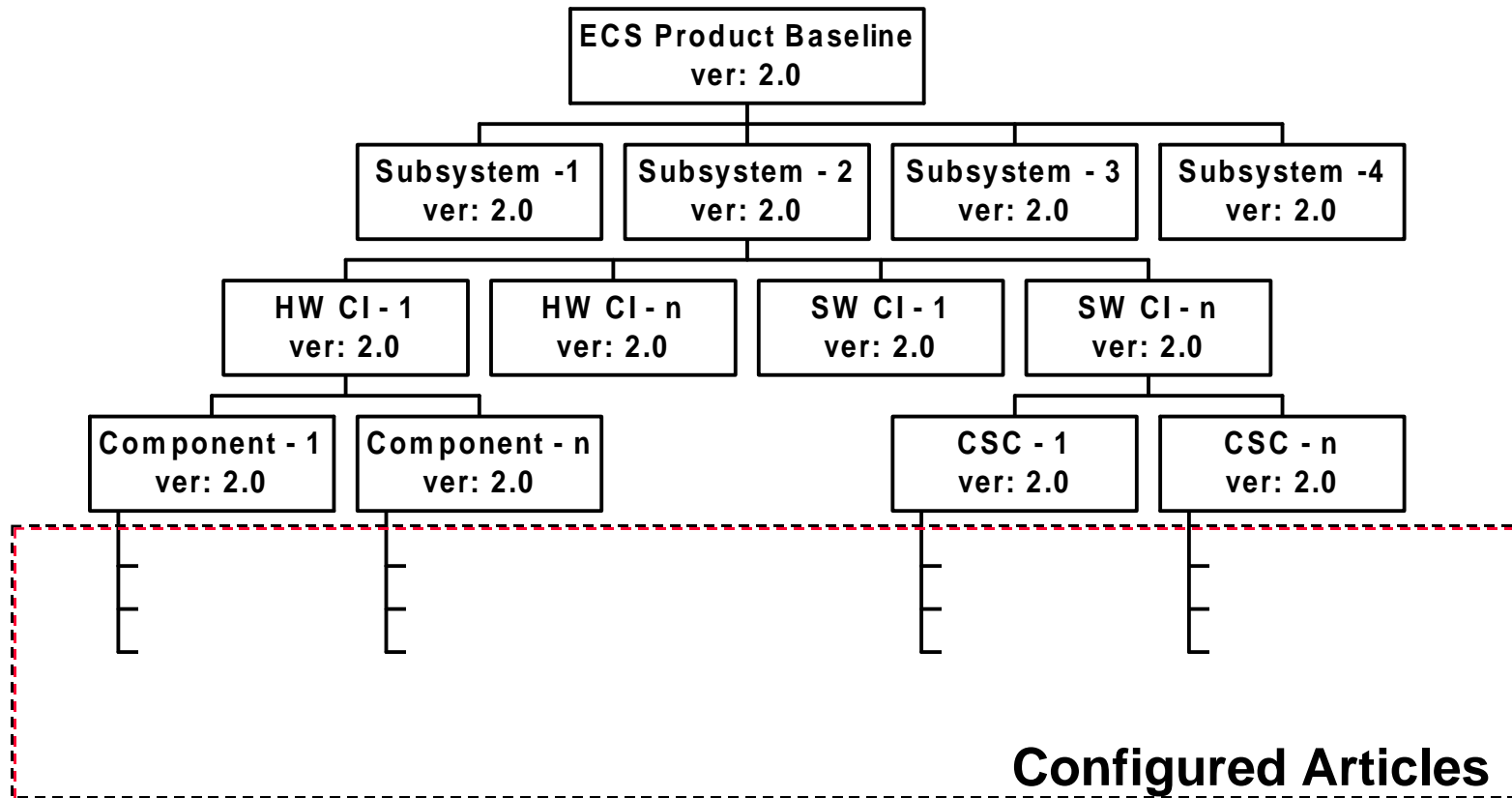
# Baseline Terms and Concepts (Cont.)



- **ECS Structure and Baseline Terms (Cont.)**
  - ***Engineering Change***: a mechanism for grouping, reporting, and controlling product changes collectively
  - ***Revision***: sequence number of a product structure change to an assembly; signifies a change to the configuration of an assembly that does not alter its form, fit, or function
  - ***Implementation Status***: a record describing the deployment of a control item to a site and the current state and associated date of its implementation; each control item has one record for each site to which it is deployed
  - ***Exporting Data***: creating a formatted file or records extracted from the BLM database; control item engineering change, product structure, and interdependency records may be extracted and sent to another BLM site via ftp
  - ***Importing Data***: loading BLM data from a formatted file

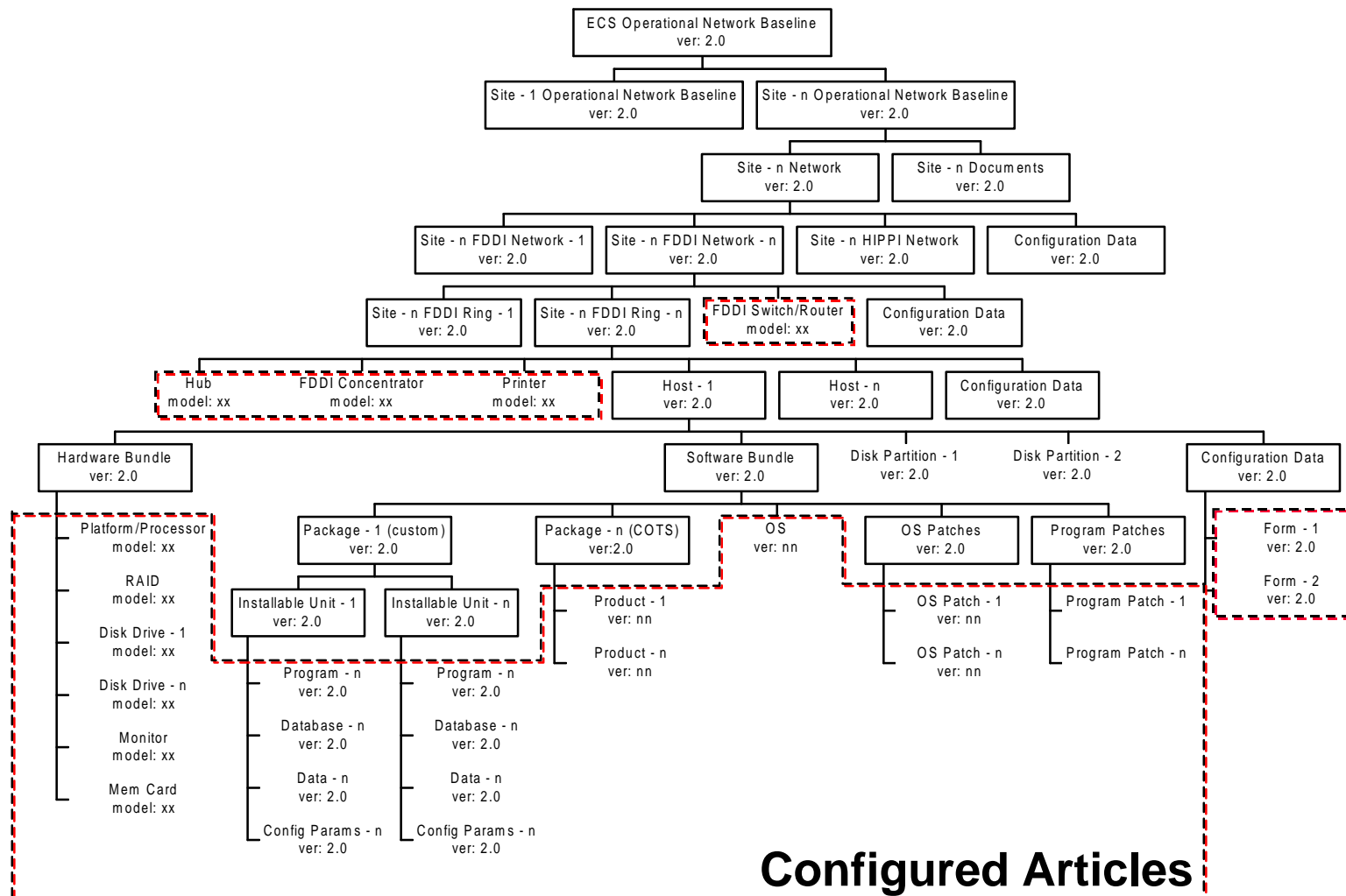
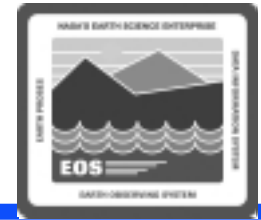


# Product Structure - Design View



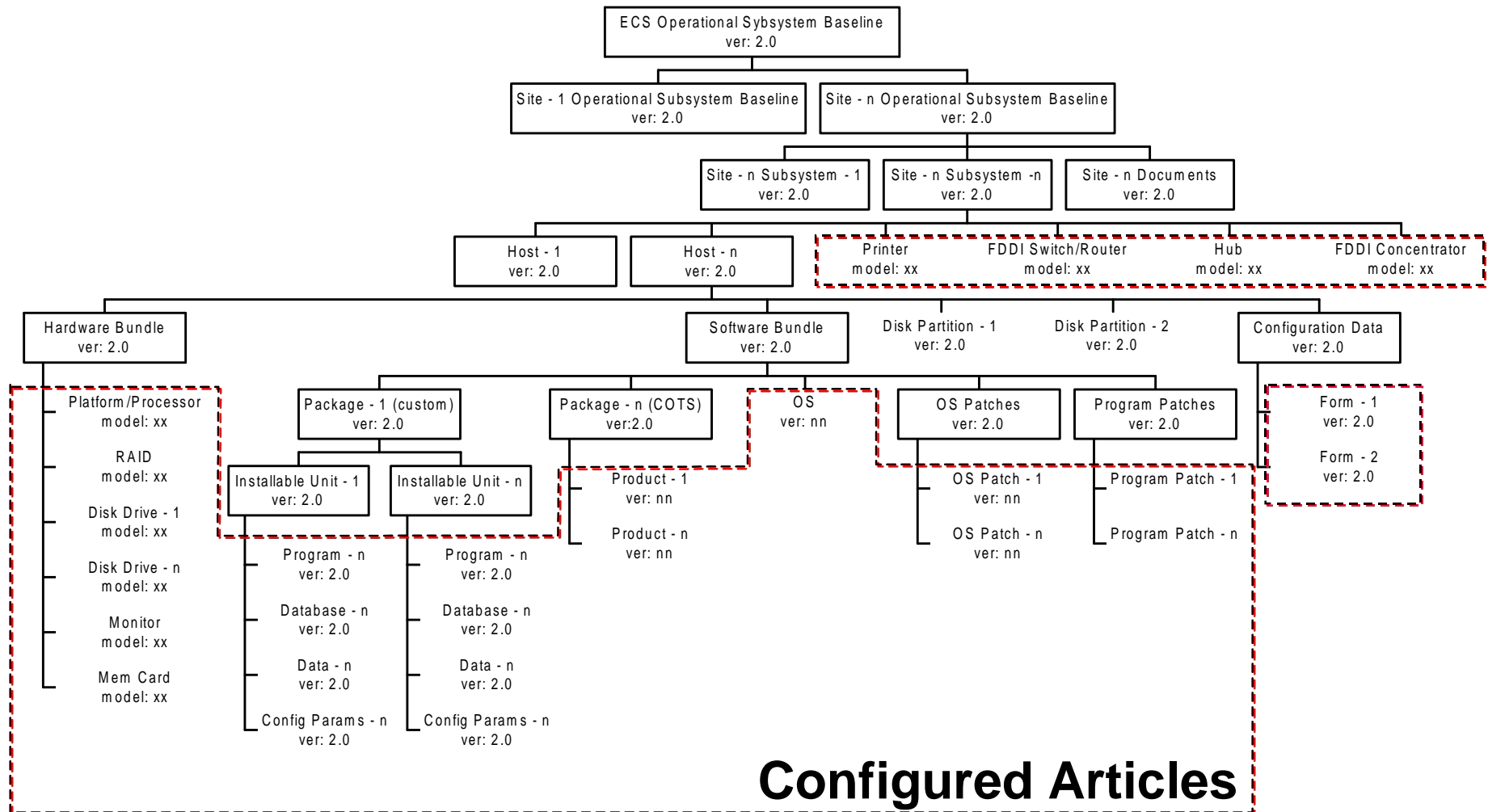
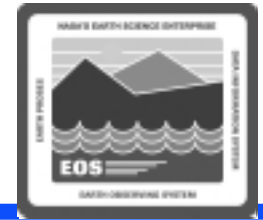


# Product Structure - Operational (Network) View



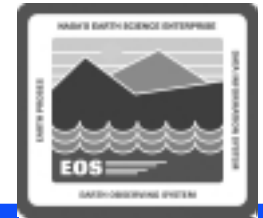


# Product Structure - Operational (Subsystem) View





# XRP-II Main Screen



XRP-II - Baseline User

ECS Management System  
Main Menu

mainm 09/12/97 11:15

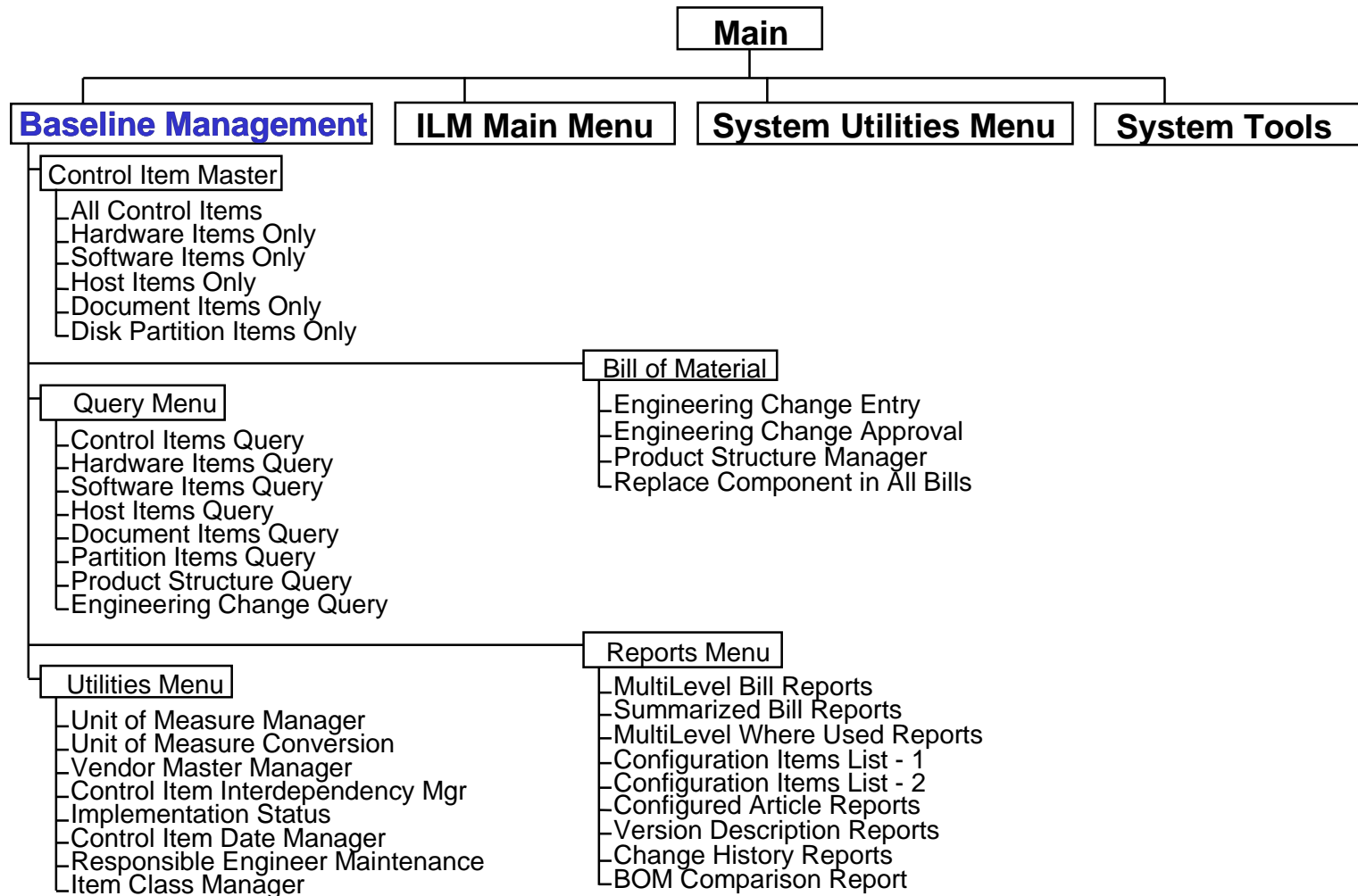
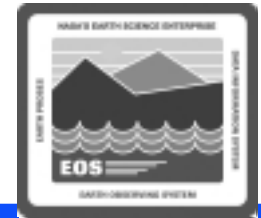
- 1. Baseline Management**
2. ILM Main Menu
3. System Utilities Menu
4. System Tools

Please enter selection (1 - 4 or name):

F1-help F3-prior menu F5-select F8-exit

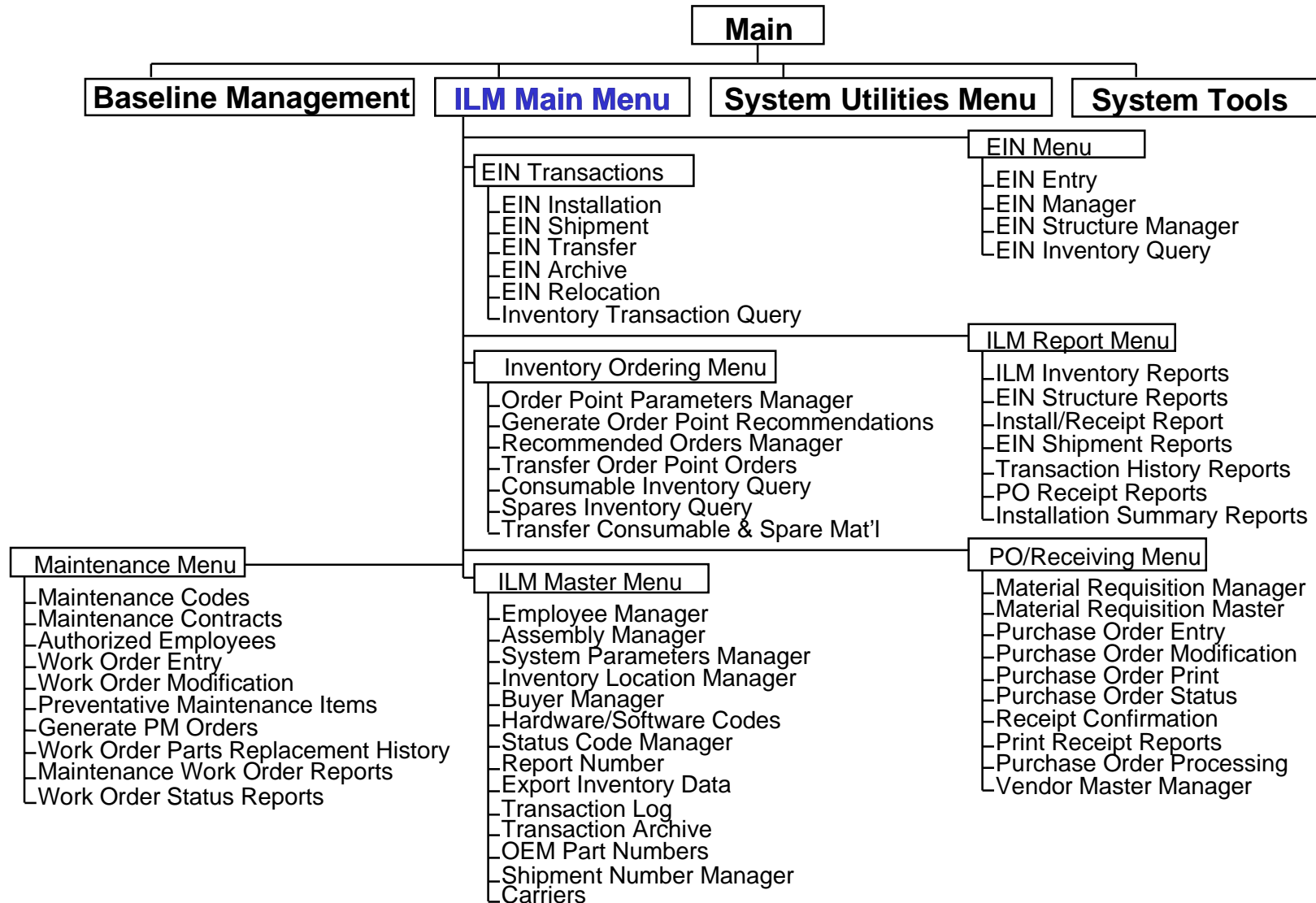


# XRP-II Hierarchical Menu Structure



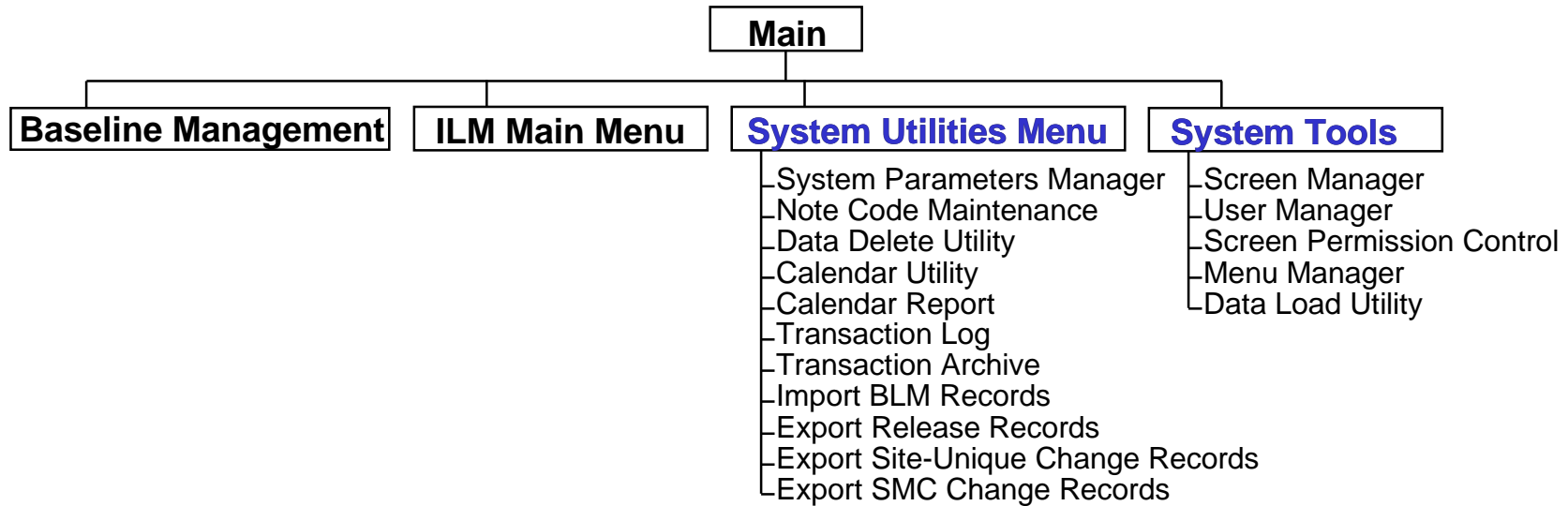


# XRP-II Hierarchical Menu Structure (Cont.)



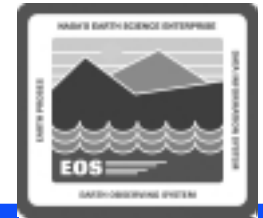


# XRP-II Hierarchical Menu Structure (Cont.)





# BLM Software Items Only CHUI



pisw Software Items Only

[pisw] SOFTWARE ITEMS ONLY: Last: 118 Current: 105

This screen selects only Software items. \* - Required fields

Control Item Id:	000006469	MNEMONIC:	
NAME:	XRP-II	ITEM SUBCLASS:	application
DESCRIPTION:	XRP-II for AM-1 Launch Ready Release		
Item Class:	software	PRED ITEM:	000369
VERSION:	B.0	Highest Revision:	
Current Revision:		*PLANNING RESOURCE:	N
*CONFIG ARTICLE:	Y	IMPLEMENTATION STATUS:	
SCOPE:	C	RESP ENG:	
DEVELOPER:	HTG		
COMMODITY CODE:	mod-COTS		
OEM PART:	XRP-II BLM MGR		
OEM DESC:			

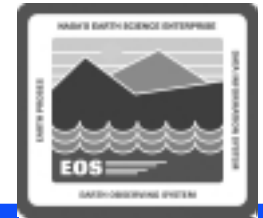
----- Details -----

VARIANT:	SUN	TCP/UDP PORT:	0
PRINCIPAL DIR:	/usr/ecs/OPS/COTS/xrp	TOTAL LICENSES:	20
LICENSE TYPE:	float	PROJECT:	ECS
INSTALL INST:			
COMMENT:			
CODE:	NOTE:		
CODE:	NOTE:		
CODE:	NOTE:		

Next Prior View Find Go Select /Sort /Note Copypart Bom Where Ec Help More Quit



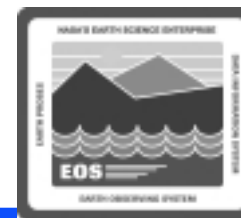
# BLM Engineering Change



[pibomsa] ENGINEERING CHANGE APPROVAL:		Last:	417	Current:
Parent Part:	b90001360			
Engineering Change:	Training			
Name:	Operator Ingest I/F CSC			
PROJECT:	ECS			
Date Entered:	09/29/97			
Operator Id:	pvan			
APPROVAL CODE:	A	APPROVAL DATE:	09/29/97	
CCR #:				
TT:				
SORT ORDER:	R	[P=part R=reference S=sort #]		
DRAWING:		REVISION:		
IMPLEMENTATION CODE:				
BASLINE / RELEASE:				
ACTIVE DATE:	09/29/97			
INACTIVE DATE:	**/**/**			
Next Prior View Find Go Select /Sort /Note Copy-dates Items Help More Quit /Z				



# ILM EIN Entry & Manager Screens



```

[leinent] EIN ENTRY:

EIN: _____ RETURN for next
SERIAL NUMBER:
OEM PART NUMBER:
OEM DESCRIPTION:
BASELINE ID:
ECS NAME:
HDWSFT CODE:
MODEL/VERSION:
MFG:
YEAR MFG:
VENDOR:
SOFTWARE LIC NUM:
MAINT VENDOR:
MAINT CONTRACT:
STATUS CODE:
NASA CONTRACT:
RELEASE CODE:
PO Number:
Tran Code:
LOCATION:
BUILDING:
ROOM:
USER:
UNIT COST:

NOTE:
WARRANTY EXP DATE:

ADD: F1-help F2-clear F3-exit F4-mode F6-default
Typeover mode
    
```

```

[leinmnt] EIN MANAGER: Selected: 47 Current:

EIN: EDF00000000014
ECS NAME: INGEST GUI REVISION 1
SERIAL NUMBER: 00000000000059
HDWSFT CODE: T
MODEL/VERSION: T MFG: SEO
OEM PART NUMBER: M&O TRAINING
OEM DESCRIPTION: SOFTWARE REVISION FOR INGEST GUI
VENDOR: SMC YEAR MFG: 1997
SOFTWARE LIC NUM: RECEIVE DATE: 09/30/97
MAINT VENDOR: H-C MAINT CONTRACT:
WARRANTY EXP DATE: **/**/** STATUS CODE: I
BASELINE ITEM: EDF-0000001366414315 RMA #:
NASA CONTRACT: NAS5-60000 RELEASE CODE: B
PO Number: COST: 0.000
Tran Code: 03 Installation Date: **/**/**
Report Number: 0 Shipping Report Number: 0
LOCATION: EDF BUILDING: 1616
ROOM: 1100
COMMENT:
NOTE:

Next Prior View Find Go Select /Sort /Note Copypart Bom Where Help More Quit
    
```